TOPFIELD

TF 600 PVRc

User Guide

Digital Cable Receiver

Personal Video Recorder

CONAX

DVB
Digital Video
Broadcasting

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Chapter 1

Introduction

The TF 600 PVRc digital receiver is fully compliant with the international Digital Video Broadcasting (DVB) standard, and thus is able to receive digital broadcasts of that standard.

NOTE

In general we equate a channel with a frequency. Unlike analogue broadcasts, however, digital broadcasts are not all assigned to their own frequencies; instead, multiple television broadcasts are transmitted through a single frequency. The frequency in digital broadcasting is usually called transponder. To reduce confusion in this manual, the word **service** is preferably used than **channel** as a term to indicate one television or radio broadcast.

1.1 Features

The TF 600 PVRc digital receiver has the following features:

- Can store up to 2000 television and radio services.
- You can create favourite lists of your favourite services.

- You can view information about the current television or radio programme.
- Has an electronic programme guide that provides an overview of scheduled programmes.
- You can update the firmware of the digital receiver to the latest version which would be provided by the manufacturer.
- You can record one broadcasting service while you are currently watching another.
- The large storage capacity of the built-in hard disk drive allows you to record up to about 60 hours of television —in case of 250 gigabytes— in excellent picture and sound quality.
- Time shift is a special technical feature available on the TF 600 PVRc. You can pause the programme you are watching and resume it again at a later time. Then you can quickly go to whatever part of the current programme by fast foward or backward search.

1.2 Controlling the digital receiver

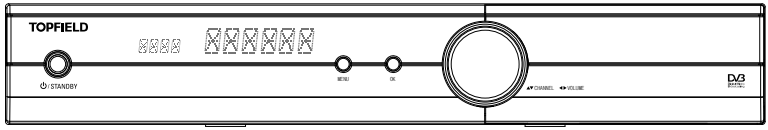
You can operate the digital receiver with the remote control and the buttons on the front panel.

NOTE

When the digital receiver is off but plugged into a wall outlet, we say that it is in standby mode; on the other hand, when it is on, it is in operation mode. Even when you are not using the digital receiver, you should keep it plugged into a wall outlet to be in standby mode so that it can run timer events at any time.

1.2.1 The front panel

The front panel of the digital receiver has buttons to control the digital receiver, and specific lamps and a display to indicate its status. The following indicates what they mean.



STANDBY button switches the digital receiver between standby mode and operation mode.

Front display displays the current time in standby mode, and displays the current service in operation mode.

MENU button displays the main menu. It is also used to return to the previous menu from a submenu.

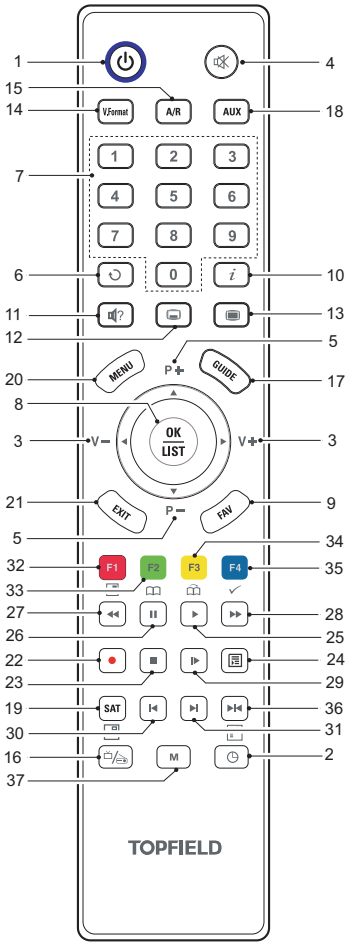
OK button displays the services list. See § 5.2.1 for more details. It is also used to select a menu item.

CHANNEL ▼, ▲ buttons switch to previous or next service. They are also used to navigate in menus and interactive screens.

VOLUME ◀, ▶ buttons decrease or increase the volume. They are also used to change values for menu options.

Pull the right edge of the front panel to open the flap. You have to insert your subscription card into the front slot to watch pay services.

1.2.2 The remote control



① ⏻ button switches the digital receiver between standby mode and operation mode.

② ◷ is used to set a sleep timer.

③ ◀, ▶ buttons decrease or increase the volume. They are also used to change values for menu options.

④ 🔇 mutes the sound. Press again to switch it back on.

⑤ ▲, ▼ buttons switch to previous or next service. They are also used to navigate in menus and interactive screens.

⑥ ↻ switches between the current service and the previously viewed one.

⑦ Numeric buttons are used to enter a service number for service change or to specify values for menu options.

⑧ OK displays the services list. See § 5.2.1 for more details. It is also used to select a menu item.

⑨ FAV displays the favourite lists.

⑩ *i* displays the service information box. It is also used to display more information about a programme.

⑪ 🔊? is used to select an audio track and a sound mode, or a video track of multifeed programme.

⑫ 💬 is used to select a subtitle track.

⑬ [▣] displays teletext.

⑭ [V.Format] changes video resolution. See § 3.2.5 for more details.

⑮ [A/R] changes aspect ratio. See § 3.2.4 for more details.

⑯ [TV/Radio] switches between television services and radio services.

⑰ [GUIDE] displays the electronic programme guide.

⑱ [AUX] switches the output of the TV SCART socket between the digital receiver and the device connected to the VCR SCART socket. See § 3.2.3 for more details.

⑲ [SAT] swaps the sub-picture with the main picture. See § 5.6 for more details.

⑳ [MENU] displays the main menu. It is also used to return to the previous menu from a submenu.

㉑ [EXIT] is used to exit the current screen.

㉒ [●] is used to start recording.

㉓ [■] is used to stop playback, to stop recording, or to jump back to live television from time-shifted television.

㉔ [▤] is used to display the list of recorded programmes that are stored on the internal hard disk drive. See § 7.2 for more details.

㉕ [▶] resumes normal playback speed, or displayes the progress bar for navigation on playback or time shift. To play a recorded programme, see button 24.

㉖ [❚❚] pauses live television or playback of a recorded programme.

㉗ [◀◀] is used to start reverse playback. Subsequent presses increase the rewind speed.

㉘ ⏩ is used to start fast motion playback. Subsequent presses increase the playback speed.

㉙ ⏯ is used to start slow motion playback. Subsequent presses change the playback speed.

㉚ ⏮ changes the position of sub-picture counterclockwise. It is also used to jump back to beginnng of recording during a playback.

㉛ ⏭ changes the position of sub-picture clockwise. It is also used to jump to end of recording during a playback.

㉜ F1 is used to display, minify or hide the sub-picture. See § 5.6 for information about picture-in-picture.

㉝ F2 is used to make a bookmark during playback or time shift.

㉞ F3 is used to jump to next bookmark position or to jump forward 30 seconds.

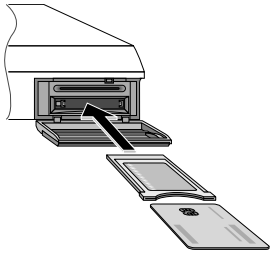
㉟ F4 is used to jump back 20 seconds for an instant replay.

㊱ ⏯ displays the services list for sub-picture. It is also used to specify a block for editing or for repeated playback.

㊲ M is not used in this model.

The F1, F2, F3, F4 and ⏯ buttons have additional different functions per menu besides their own function. They will be guided by on-screen help.

1.3 What is common interface?

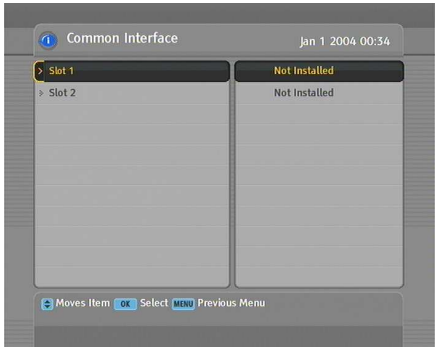


Some broadcasts are scrambled so that only paid subscribers can enjoy them. Scrambled services can only be viewed with a Conditional Access Module (CAM) and a subscription card belonging with the scrambling system.

Common Interface (CI) is the slot on a digitial receiver into which a conditional access module may be insterted. The front of the digital receiver has two common interfaces.

To watch a pay service, you should take the following steps:

1. Purchase a conditional access module and a subscription card for the pay service you want to watch.
2. Insert the subscription card into the conditional access module.
3. Insert the conditional access module into a common interface on the front of the digital receiver.



To view the information about the module and subscription card which is inserted into the digital receiver, select the Information > Common Interface menu. You should see a screen like the left figure.

Chapter 2

Setup

2.1 Unpacking

Before going any further, check that you have received the following items with your digital receiver.

- Remote control unit
- Two batteries for the remote control (AAA 1.5 V)
- A copy of this user guide

NOTE

Accessories may vary according to your local area.

2.2 Safety precautions

Please read carefully the following safety precautions.

- The mains power must be 90 to 250 volts. Check it before connecting the digital receiver to the wall outlet. For the power consumption of the digital receiver, refer to Table 2.1.

- The wall outlet should be near the equipment. Do not run an extension lead to the unit.
- Do not expose the digital receiver to any moisture. The digital receiver is designed for use indoors only. Use dry cloth when cleaning the digital receiver.
- Place the digital receiver on a firm and level surface.
- Do not place the digital receiver close to heat emitting units or in direct sunlight, as this will impair cooling. Do not lay any objects such as magazines on the digital receiver. When placed in a cabinet, make sure there is a minimum space of 10 centimetres around it. For the physical specification of the digital receiver, refer to Table 2.2.
- Protect the power cord from being walked on or pinched. If the cord is damaged, do not use the digital receiver and get the cord replaced.
- Never open the digital receiver casing under any circumstances, or the warranty will be void.
- Refer all servicing to a qualified service technician.

Table 2.1: Power specifications

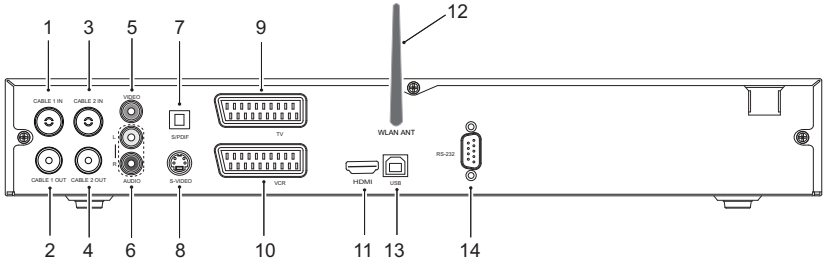
Input voltage	90 to 250 V AC, 50/60 Hz
Power consumption	31 W at maximum in operation
	8 W in standby

Table 2.2: Physical specifications

Size	380 × 60 × 265 mm
Weight	4.3 kg
Operating temperature	0 to 45 °C
Storage relative humidity	5 to 90 %

2.3 Rear panel connections

The TF 600 PVRc has a wide range of connections on the back.



Check what connections your television set has in comparison with the digital receiver.

① CABLE 1 IN Cable broadcasting signal input socket for the first tuner.

② CABLE 1 OUT Cable broadcasting signal output socket through the first tuner.

③ CABLE 2 IN Cable broadcasting signal input socket for the second tuner.

④ CABLE 2 OUT Cable broadcasting signal output socket through the second tuner.

⑤ VIDEO Composite video output socket for the television set. (yellow)

⑥ AUDIO L/R Stereo audio output socket for the television set or the audio system. (white/red)

⑦ S/PDIF Dolby digital output socket for the audio system.

⑧ S-VIDEO Super video output socket for the television set.

⑨ TV	Audio and video output socket for the television set.
⑩ VCR	Audio and video input/output socket for the video cassette recorder or suchlike.
⑪ HDMI	Audio and video output socket for the high definition television set.
⑫ WLAN ANT	Antenna for wireless local area network. See Chapter 8.
⑬ USB	USB port for firmware update and data transfer.
⑭ RS-232	Serial port for firmware update and data transfer.

Table 2.3: Connectors specifications

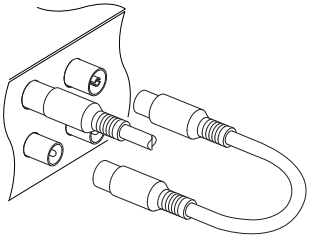
HDMI	High definition video output
	Left & right audio output
	Dolby digital audio output
VIDEO	Composite video (CVBS) output
AUDIO	Left & right audio output
S-VIDEO	Super video (S-Video) output
TV	CVBS/S-Video/RGB/YUV video output
	Left & right audio output
VCR	CVBS video output
	Left & right audio output
	CVBS/S-Video/RGB/YUV video input for bypass
	Left & right audio input for bypass
S/PDIF	Dolby digital audio output
RS-232	115.2 kbps at maximum
USB	2.0 device

2.4 Connecting up your digital receiver

There are several ways to set up the digital receiver. Set up the digital receiver suitably to your television and other appliances.

If you have any problem with your setup or need help, contact your dealer.

2.4.1 Connecting to the broadcasting cable



Whatever sort of connection you have between the digital receiver and the television, you need to connect the digital receiver to the broadcasting cable so that it can receive digital television services.

Connect the broadcasting cable to the CABLE 1 IN connector on the back panel of the digital receiver.

Also, you must ensure that there is a connection to both the CABLE 1 IN and CABLE 2 IN connectors on your digital receiver, so that both tuners work properly.

Normally you do that by using a loop cable to link from the CABLE 1 OUT connector to the CABLE 2 IN connector.

If you have another digital receiver, you may link it from the CABLE 2 OUT connector.

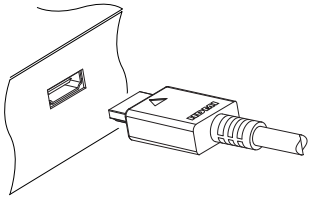
2.4.2 Connecting to your television

Between all the following connectors of the digital receiver, we recommend you to use the first connector to get best picture quality. If your television does not have the matching connector, then use the next connector in the following order for better picture quality.

1. HDMI connector (HDMI)
2. SCART connector (TV)
3. S-Video connector (S-VIDEO)
4. Composite connector (VIDEO)

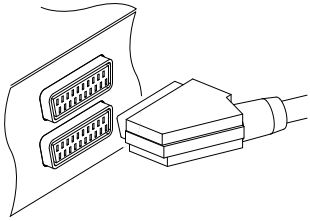
You should configure audio and video settings after connecting up the digital receiver. See § 3.2 for detailed description.

To use the HDMI connector



If you have a high definition television set, you should use a HDMI cable for best results. Plug one end of the cable into the HDMI socket on the digital receiver, and plug the other end into the matching socket on your television. In this case, you do not have to make audio connections because the HDMI connector can output stereo audio or Dolby digital audio.

To use the SCART connector



For best results with a standard television set, you should use a SCART cable. Plug one end the cable into the TV socket on the digital receiver, and plug the other end into a free SCART socket on your television.

Some televisions have inputs via S-Video or Component connectors rather than SCART.

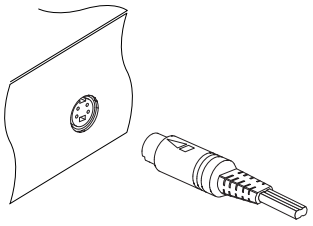
If you have such a television, use an appropriate conversion cable to link the TV socket on the digital receiver to the matching socket on your television.

If you connect with a standard SCART cable, you do not have to make audio connections because the SCART connector can output stereo audio. But if you use a conversion cable, such as SCART-to-Component, you have to make audio connections.

NOTE

You cannot view high definition video with the SCART connector.

To use the S-Video connector

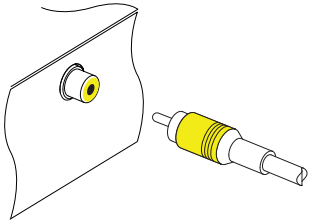


NOTE

You cannot view high definition video with the S-Video connector.

You will need to obtain a S-Video cable to use the S-Video connector. Plug one end of the cable into the S-VIDEO socket on the digital receiver, and plug the other end into the matching socket on your television.

To use the composite video connector

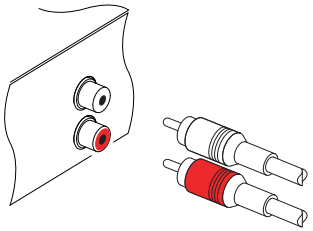


NOTE

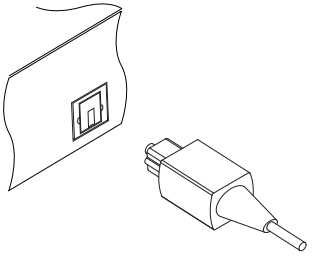
You cannot view high definition video with the composite video connector.

You will need to obtain a composite video cable (RCA cable) to use the composite video connector. Plug one end of the cable into the VIDEO (yellow) socket on the digital receiver, and plug the other end into the matching socket on your television.

To connect the audio connectors



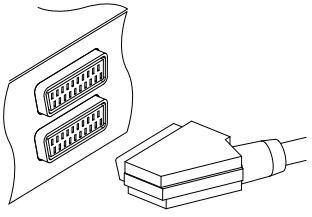
You will need to obtain an audio cable (RCA cable) to connect the audio connectors. Plug one end of the cable into the AUDIO L (white) and AUDIO R (red) sockets on the digital receiver, and plug the other end into the matching sockets on your television or audio system.



To enjoy Dolby digital audio, your television or audio system must be able to decode Dolby digital audio, and you will need to obtain a S/PDIF cable. Plug one end of the cable into the S/PDIF socket on the digital receiver, and plug the other end into the matching socket on your audio system.

2.4.3 Connecting to your video cassette recorder

The digital receiver can also output video to another appliance such as a video cassette recorder or video receiver through an auxiliary SCART connector.



You will need to obtain a SCART cable to use the auxiliary SCART connector. Plug one end of the cable into the VCR socket on the digital receiver, and plug the other end into the matching socket on your video cassette recorder or suchlike.

2.5 Switching on for the first time

Now that you have your digital receiver connected, you should plug it in to a mains socket. Ensure that your television set is turned on, so that you will be able to see the display from the digital receiver.

2.5.1 Inserting batteries in the remote control

To insert the batteries, open the battery compartment by removing the lid, and then insert the batteries observing the polarity, which is marked on the base of the battery compartment.

If the digital receiver no longer reacts properly to remote control commands, the batteries may be flat. Be sure to remove

used batteries. The manufacturer accepts no liability for the damage resulting from leaking batteries.

NOTE

Batteries, including those which contain no heavy metals, may not be disposed of with household waste. Please dispose of used batteries in an environmentally sound manner. Find out about the legal regulations which apply in your area.

2.5.2 Powering on and checking picture

Now, press the ⏻ button in top left corner on the remote control.

If you do not see a picture, check that the television is set to the correct input.

If the picture is good, you can skip to § 4.1 to search for the available television and radio services. Otherwise, you may need to temporarily connect the composite video connector (VIDEO) to your television set so that you can see the on-screen menus in order to configure the video settings.

Chapter 3

Preference Settings

3.1 Language settings

You can select the language in which the menu would be displayed. In addition to that, you can select which language of audio track and of subtitle track should be output.

Select the System Setting > Language Setting menu. You should see a screen like the left figure.

Menu language

The digital receiver supports many menu languages: Dutch, English, German, French, Italian, Russian, Turkish and so forth. Set the Menu Language option to your desired language. Once you select a language, the menu will be immediately displayed in the selected language.

Subtitle language

Set the 1st Subtitle Language option and the 2nd Subtitle Language option to your desired languages. When you watch a programme, if the programme has a subtitle track of the language that is designated for the 1st Subtitle Language, it will be displayed. If the first language is not available but the second language is available, the subtitle of the second language will be displayed. If there is not any available language, no subtitle will be displayed.

Apart from this setting, you can select a subtitle track with the [SUBTITLE] button. See § 5.2.5 for detailed description.

Some broadcaster may send a subtitle track dedicated to persons who have difficulty in hearing. Even when one or more subtitle tracks are available, that subtitle track will be displayed prior to those you have designated for the 1st Subtitle Language and the 2nd Subtitle Language options if the Hard of hearing option is set to On.

Audio language

Set the 1st Audio Language option and the 2nd Audio Language option to your desired languages. When you watch a programme, if the programme has an audio track of the language that is designated for the 1st Audio Language, it will be output. If the first language is not available but the second language is available, the audio of the second language will be output.

Apart from this setting, you can select an audio track with the [AUDIO] button. See § 5.2.4 for detailed description.

3.2 Video and audio settings

You have to configure the video and audio settings appropriately to your television set and other appliances.

Select the System Setting > A/V Output Setting menu. You should see a screen like the left figure.

3.2.1 Television standard

The digital receiver supports two television standards. One is PAL standard, and the other is NTSC standard. PAL was adopted in European countries while NTSC is adopted in USA, Canada, Mexico and so forth.

If you have a PAL television, you have to set the TV Type option to PAL. In that case, if you switch to a service of the NTSC standard, the digital receiver will presents the pictures converting into the PAL standard. However, it is inevitable to lose a little picture quality. Likewise, the contrary case brings about the same result.

The best thing is to watch PAL services with a PAL television and to watch NTSC services with a NTSC television. However, a multi television set is able to process both of them. So if you have a multi television set, you had better set the TV Type option to Multi. Then the digital receiver will present pictures without standard conversion.

3.2.2 Colour model

Through the TV SCART connector, the digital receiver is able to output video in various colour models. If you have the

digital receiver linked to your television via this connector, you should set the SCART Output option to your desired colour model. If you have connected via the RCA connector labeled VIDEO on the back panel, you do not have to set this option because the digital receiver outputs CVBS video through the RCA connector independent of the SCART connector.

However, if you have connected via the S-VIDEO connector, you have to set this option to S-Video because the output through S-Video connector comes from the SCART interface.

It is known in general that the RGB colour model provides the best video quality with little difference from the YUV colour model but the CVBS colour model does the least. So RGB would be most desirable for this option.

3.2.3 Video cassette recorder

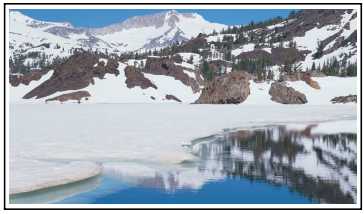
You can have the digital receiver linked to your video cassette recorder or such an appliance via the VCR SCART connector. In that case, the digital receiver will operate differently depending on the setting of the VCR Scart Type option. If the option is set to Standard, the digital receiver will pass the video from the video cassette recorder to your television when it starts playback. But if the option is set to External A/V, the digital receiver will not pass the video automatically. To pass it, you have to press the AUX button.

NOTE

It is impossible for the digital receiver to record the video that the video recorder plays back because the digital receiver is just a bypass for the video recorder.

3.2.4 Television aspect ratio

If you have a wide-screen television, set the TV Aspect Ratio option to 16:9.



You can enjoy well both wide-screen programmes and normal-screen programmes with your wide-screen television as the above figures show. To watch normal-screen programmes in full screen like the left figure, set the 4:3 Display Format option to Full. Normal-screen pictures then will be inflated to fit to the width of the wide screen. Otherwise, to watch them in the original ratio like the right figure, set it to Center.

Otherwise, if you have a normal-screen television, set the TV Aspect Ratio option to 4:3.

You cannot fully enjoy wide-screen programmes with your normal-screen television as the above figures show. The left figure shows a normal picture displayed in the normal screen. To watch wide-screen programmes in the shape like the centre figure, set the 16:9 Display Format option to Letter Box. Wide-screen pictures then will be reduced to fit to the width of the normal screen. Otherwise, to watch them in the shape like the right figure, set it to Center extract. Wide-screen pictures then will be cut out on the left and right sides equally to fit to the width of the normal screen.

3.2.5 High definition television

The digital receiver supports various video resolutions from 576 to 1080. In general a resolution of 720 or more is considered high definition. The higher the resolution is, the better quality you can enjoy. However, if your television set does not support high definition, you cannot enjoy high definition quality picture.

Set the HDMI Output option as you desire. The available values for this option are changed according to the TV Type option. If you set this option to 576P, the digital receiver will present even high definition programmes in resolution of 576. On the contrary, if you set it to 1080I, the digital receiver will present even standard definition programmes in resolution of 1080.

NOTE

You can enjoy only standard definition video with the following connectors:

- Composite video connector (VIDEO)
- S-Video connector (S-VIDEO)
- SCART connector (TV)

3.2.6 Video scaling

By adjusting the Video Output Scaling option, you can inflate or shrink pictures from -20 to $+20$ percent so that they could fit tight to the frame of your television without black space.

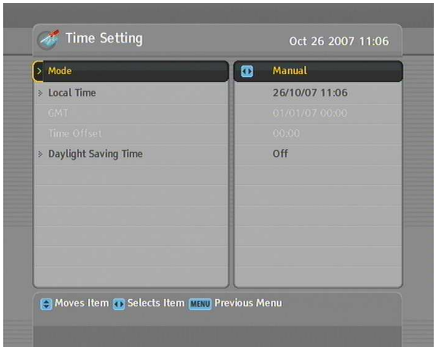
3.2.7 Audio mode

Basically, there are two audio sources as you can find two audio sockets on the back panel of the digital receiver. You can enjoy only one source or both of them in either stereo or mono. Set the Sound Mode option as you desire.

Apart from this setting, you can change the sound mode with the [🔊?] button. See § 5.2.4 for detailed description.

3.3 Local time setting

You should set your local time for timer events.



Select the System Setting > Time Setting menu. You should see a screen like the left figure.

You can set the clock manually or use the time signal, Greenwich Mean Time (GMT), carried as part of the digital television broadcast.

To use Greenwich Mean Time, take the following steps:

1. Set the Mode option to Auto; then the Time Offset option becomes enabled.
2. Set the Time Offset option to the time difference between your time zone and GMT referring to Table 3.1.
3. Make sure that your local time is correctly displayed on the Local Time option.

To set the local time yourself, set the Mode option to Manual and enter your local time to the Local Time option with the numeric buttons. The time format is *day/month/year 24-hour:minute*.

If daylight saving time is observed in your state at the moment, set the Daylight Saving Time option to On.

NOTE

Daylight saving time adds one hour to the time when the option is set to On. When setting the time offset from Greenwich Mean Time, make sure that time offset does not include daylight saving time.

Table 3.1: Time offset table

Time offset	City
GMT − 12:00	Eniwetok, Kwajalein
GMT − 11:00	Midway Island, Samoa
GMT − 10:00	Hawaii
GMT − 09:00	Alaska
GMT − 08:00	Pacific Time US, Canada
GMT − 07:00	Mountain Time US, Canada
GMT − 06:00	Central Time US, Canada, Mexico City
GMT − 05:00	Eastern Time US, Canada, Bogota, Lima
GMT − 04:00	Atlantic Time Canada, La Paz
GMT − 03:30	Newfoundland
GMT − 03:00	Brazil, Georgetown, Buenos Aries
GMT − 02:00	Mid-Atlantic
GMT − 01:00	Azores, Cape Verde Islands
GMT	London, Lisbon, Casablanca
GMT + 1:00	Paris, Brussels, Copenhagen, Madrid
GMT + 2:00	South Africa, Kaliningrad
GMT + 3:00	Baghdad, Riyadh, Moscow, St. Petersburg
GMT + 3:30	Tehran
GMT + 4:00	Abu Dhabi, Muscat, Baku, Tbilisi
GMT + 4:30	Kabul
GMT + 5:00	Ekaterinburg, Islamabad, Karachi, Tashkent
GMT + 5:30	Bombay, Calcutta, Madras, New Delhi
GMT + 6:00	Almaty, Dhaka, Colombo
GMT + 7:00	Bangkok, Hanoi, Jakarta
GMT + 8:00	Beijing, Perth, Singapore, Hong Kong
GMT + 9:00	Tokyo, Seoul, Osaka, Sapporo, Yakutsk
GMT + 9:30	Adelaide, Darwin
GMT + 10:00	Eastern Australia, Guam, Vladivostok
GMT + 11:00	Magadan, Solomon Islands, New Caledonia
GMT + 12:00	Fiji, Auckland, Wellington, Kamchatka

3.4 Parental control

In general, television programmes are classified according to the level of violence, nudity and language of their content. When you are watching a programme, you can check its programme classification on the information box. For the information box, see § 5.2.3.

You can prevent your children from watching specific programmes by specifying a programme classification.

Select the System Setting > Parental Control menu. You should see a screen like the left figure, and you will be asked your Personal Identification Number (PIN). The number is initially set to '0000'.

If you wish to block 15 or above rated programmes, set the Censorship option to 15 (age). Setting it to No block blocks no programme; on the other hand, setting it to Total block blocks every programme.

NOTE

If a programme does not have any programme classification information, your censorship setting will not take effect.

If anyone is trying to watch a programme that is of or above the censorship setting, the person has to enter the personal identification number to override.

To change the number, select the Change PIN Code menu; then an input box appears. You have to enter a desired number twice for confirmation.

You can also restrict uses of some menus. Selecting the Access Control menu displays a list of menus that you can lock. If the Time Setting item is set to Locked, you have to enter the personal identification number when accessing the Time Setting menu. If you enter a wrong number, you cannot use the menu. To release a shut item, set it to Unlocked.

3.5 Adjusting the on-screen display

You can adjust the transparency level of the on-screen display. Select the System Setting menu and set the OSD Transparency option as you desire. Its available range is from 0 to 50 percent.

You can adjust the display time of the information box. For the information box, see § 5.2.3. To adjust its display time, select the System Setting menu and set the Info Box Display Time option as you desire. Its available range is from 1 to 30 seconds. If you set this option to No Info Box, the information box will not be displayed when you switch services. However, pressing the [i] button will display the information box. If you set this option to Never Hide, the information box will always be displayed.

In addition, you can raise or lower the position of the information box. Select the System Setting menu and set the Info Box Position option as you desire. Its available range is from -10 to $+3$ lines. The more high you set the option, the more low the information box will be positioned.

3.6 To turn on the time shift feature

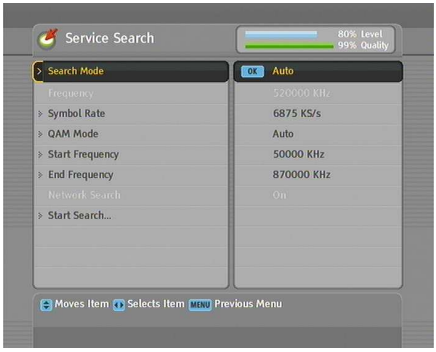
Time shift means that the most recent hour of the television service you are watching gets saved temporarily on the hard disk of the digital receiver. When this feature is enabled, you can reverse and pause live television as if playing back a recording. To enable this feature, select the System Setting menu and then set the Time Shifting option to Enable. See § 5.5 for how to use this feature.

Chapter 4

Service Search

After connecting up the digital receiver, you will need to perform a service search.

4.1 Searching broadcasting services



To perform service search, select the Installation > Service Search menu. You should see a screen like the left figure.

You should set the Search Mode option to Auto at the first service search after installing the digital receiver. The digital receiver will search all available services with the automatic search mode within the frequency range from the frequency of the Start Frequency option to the frequency of the End Fre-

quency option. Symbol Rate stands for data transfer rate, and QAM is a form of modulation used in digital broadcasting. Broadcasting operators send their services in a symbol rate by a modulation method. Perhaps you do not have to specify the Symbol Rate and QAM Mode options since they are seldom changed. However, you should set the QAM Mode option to Auto for more certainty. You can specify the Start Frequency, End Frequency and Symbol Rate options with the numeric buttons if you want to change them.

If the digital receiver have failed to find every service you want in a service search, you should set the Search Mode option to Network. With this option, the digital receiver will check up the up-to-date channel information as searching services, but it takes rather longer time.

To search only one frequency, set the Search Mode option to Manual and specify your desired frequency at the Frequency option with the numeric buttons. In this case, you had better set the Network Search option to On.

It is most recommended that you should set the Search Mode option to Quick Scan. With this option, you can search every service rather quickly.

To start service search, select the Start Search item; then a list box appears, in which found services will be listed. When it has completed, press the OK button to save found services. To stop at any time or to exit without saving, press the EXIT button.

4.2 Resetting to factory settings

The digital receiver maintains the following data:

- Services list
- Favourite list
- Timer list
- Preference settings

You can reset all data of the digital receiver. To do that, select the Installation > Factory Setting menu, and then you are asked for confirmation. If you select Yes, service entries, favourite entries and timer events will all be deleted, and preference options will be reset to the manufacturer's factory settings.

NOTE

A factory reset will not delete any recorded programmes.

4.3 Clearing the services list

If you want to delete all services, select Installation > Reset Service List; then you are asked for confirmation. If you select Yes, the services list will be cleared.

NOTE

You cannot undo the services list but you have to perform service search again.

Chapter 5

Daily Usage

5.1 Volume control

Use the ◀ and ▶ buttons to alter the volume to a comfortable level. You may need to adjust the volume on your television set too. To temporarily switch off the sound, press the 🔇 button. Press it again to restore the sound to previous level.

5.2 Watching television

To change services, press the ▲ or ▼ button. Pressing the ↺ button switches to the previously viewed service. In addition, you can switch to your desired service by entering its service number with the numeric buttons. You can also select a service to watch in the services list.

5.2.1 The services list

To view the services list, press the OK button.

On the services list, you can see the service information:

- Service number and name
- Transponder information

A dollar sign (**$**) may be marked on some entries, indicating pay service. To watch pay services, you need the subscription card.

To select a desired service, put the highlight bar on its entry with the ▲ or ▼ button and press the OK button; then it will be presented. Pressing the ◀ or ▶ button skips over 10 entries up or down. Entering a service number with the numeric buttons puts the highlight bar on its entry.

You can switch between the television services list and the radio services list by pressing the button.

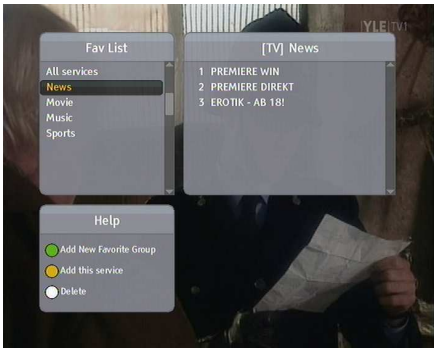
Pressing the F1 button displays the additional options, with which you can do the following:

- By setting the Show Provider option to On, you can view service entries by groups of broadcasters.
- To change the name of the highlighted service, select the Rename option; then the on-screen keyboard appears, with which you can enter a new name. See § 6.2 for how to use the on-screen keyboard.
- You can prevent other family members from watching the highlighted service by setting the Lock option to Locked. You have to enter your personal identification number to watch or unlock it.

- To add the highlighted service into a favourite group, select the Add to Fav option; then the favourite groups will be displayed. Put the highlight bar on a desired group and press the OK button.

5.2.2 The favourite services list

You can select a service to watch on a favourite list as well as on the services list.



To display the favourite lists, press the FAV button. You should see a screen like the left figure. As you move the highlight bar up or down on the favourite group list at the left box, favourite services belonging to the highlighted group are listed on the right box.

For how to edit the favourite lists, refer to § 6.1.

To select a favourite service, put the hightlight bar on a desired group and press the ▶ button; a highlight bar appears on its favourite services list. Once you select a desired service with the OK button, it will be presented. Otherwise, to select other group, press the ◀ button.

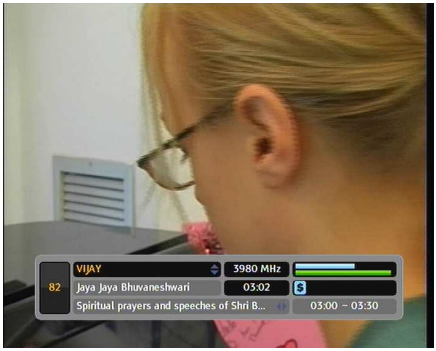
After you have selected a favourite service, if you then switch to another service using the ▲ or ▼ button, it will be also another favourite service of the selected group. The digital receiver will remind you what group you have selected by displaying its name at the top right of the screen whenever you switch services. If you wish to get out of the current group, select the All services group on the favourite group list.

Besides that, you can add or delete a favourite group or service. To add the service you are currently watching into a favourite

group, put the highlight bar on a desired group and press the F3 button. To create a new group, press the F2 button; then the on-screen keyboard appears. Enter your desired name and save it. See § 6.2 for how to use the on-screen keyboard. To delete a group or a service, press the ⏭ button; then you get asked for confirmation. If you select Yes, it will be deleted.

5.2.3 Viewing programme information

Pressing the *i* button displays the information box, on which you can see all of the following:



- Service number and name
- Signal level and quality
- Programme name
- Programme classification symbol
- Programme summary
- Broadcasting time
- Current time

In addition, you might see the following symbols:

- Subtitle symbol (▭) if subtitle tracks are provided on the current programme.
- Teletext symbol (▤) if teletext pages are provided on the current service.
- Dolby symbol (◧◨) if Dolby audio track is porvided on the current programme.
- Dollar symbol (**$**) if the current service is a pay service.
- Multifeed symbol (▣) if the current programme is provided as a multifeed programme. To use this feature, refer to § 5.4.

When you are not using time shift, if the electronic programme guide is provided on the current service, you can see the information about the current and next programmes with the ◀ or ▶ button. To adjust the sound volume in this case, hold down the ◀ or ▶ button until the sound bar appears and reaches your desired level.

Pressing the [i] button once more displays detailed information about the current programme. To hide the information box, press the [EXIT] button.

5.2.4 Selecting audio tracks

Some programmes are provided with audio tacks in one or more languages. Pressing the [🔊?] button displays available audio tracks. Once you select an audio track, it will be sounded. In addition, you can enjoy audio tracks in four sound modes: Stereo, Mono, Left or Right. However, if a multifeed programme is provided at the moment, video tracks will be displayed. In this case, you have to press the [🔊?] button once more to select an audio track.

5.2.5 Selecting subtitle tracks

Some programmes are provided with subtitle tracks in one or more languages. If the current programme provides subtitle tracks, the subtitle symbol ([▭]) will be marked on the information box. Pressing the [▭] button displays available subtitle tracks. Once you select a subtitle track, it will be displayed.

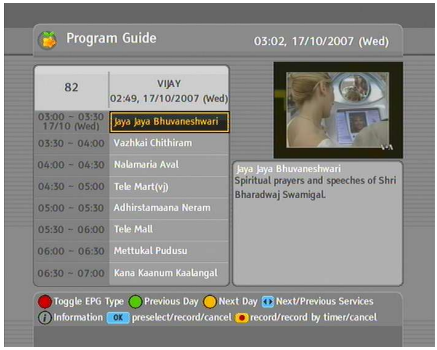
5.2.6 Viewing teletext

On some services, such information as weather reports, news or stock quotations is provided by means of teletext. If the current service provides teletext, the teletext symbol ([☰]) will be displayed on the information box. Press the [▣] button to view teletext pages.

Select a desired page to view by entering its page number with the numeric buttons. You can zoom into a teletext page with the F3 button, and adjust its transparency level with the F4 button. To hide the teletext screen, press the EXIT button.

5.3 Viewing electronic programme guide

The Electronic Programme Guide shows the current and scheduled programmes that are or will be available on each service with a short summary for each programme.



Pressing the GUIDE button displays the electronic programme guide, on which you can see the following:

- Scheduled programmes
- programme summary
- Broadcasting date
- Broadcasting time

To see detailed information of a desired programme, put the highlight bar on your choice with the ▲ or ▼ button and press the *i* button. To switch to another service, press the ◀ or ▶ button. You can travel over previous days with the F2 button, and can travel over next days with the F3 button.

To see the programme guide for radio broadcasts, press the button. To switch it back, press the button again.

Pressing the F1 button displays the programme guide in the form of a spreadsheet. To switch it back, press the F1 button again.

You can make a timer recording on the electronic programme guide. See § 7.1.3 for detailed description.

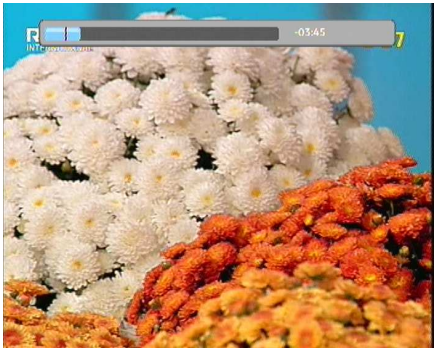
5.4 Watching multifeed programme

Some broadcasts such as sports channels can provide a variety of perspectives on a programme at a same time. We call it a multifeed programme. You can select and watch a perspective you prefer.

If a multifeed programme is provided on the current service, the multifeed symbol ( ) will be marked on the information box. Press the [ ] button, then available video tracks will be listed. Once you select one, it will be presented. At this time, you have to press the [ ] button once more to select audio tracks.

5.5 Using time shift

You can pause and resume a live television programme, and even rewind and replay it. When you are watching a programme and you miss something, you can rewind and replay it. Or when your attention is needed elsewhere, you can pause it and resume it a short time later without losing any of it.



When you do this, you are no longer watching the live programme, instead you are watching a delayed presentation of it. This is called time shifted television. Then, you can skip commercials until you catch up to the live broadcast.

In order to use the time shift feature, the Time Shifting option must be set to Enable. See § 3.6.

When enabled, the digital receiver will keep as much as one hour recording buffer of current service by utilizing the hard disk drive storage. The buffer will reset each time you change to another service.

With time shift enabled, the following operations are possible:

- To go back in time, hold down the ◂◂ button; to go forward, hold down the ▸▸ button. The progress bar is displayed momentarily with a preview window.
- You can navigate using the progress bar, refer to § 7.3.1.
- You can jump forward 30 seconds at a time by pressing the F3 button.
- You can jump backward 20 seconds at a time by pressing the F4 button.
- You can change playback speed. For slow motion see § 7.3.2. For fast motion see § 7.3.3.
- To check your current position in time shift, press the *i* button. The time difference compared to live programme is displayed momentarily in top right corner of screen. A value of −02:00 means two minutes behind live programme.
- To make a recording of what is in time shift, see § 7.1.4.
- To end time shift, press the ■ button. The live programme will be presented.

When time shift option is disabled and pause is kept for more than 10 seconds, the time shift feature will be switched on to stop you loosing part of the programme. In such case it will remain enabled until you change services.

5.6 Using picture in picture

You can watch two services at the same time with one of them presented in a sub-picture. We call this feature picture-in-picture.

The instructions on how to use the picture-in-picture feature are as follows:

1. Press the F1 button to display a sub-picture, on which another service will be presented.
2. Pressing the F1 button once more minifies the sub-picture, and pressing it once again hides the sub-picture.
3. To display the services list for the sub-picture, press the ⏭ button.

   NOTE
   When a recording is in progress, the available services in the services list may be limited.

4. Pressing the ⏮ button moves the sub-picture counter-clockwise, and pressing the ⏭ button moves it clockwise.
5. Pressing the SAT button swaps the main picture with the sub-picture. Even when you play back a recording, you can watch a live programme in the sub-picture. However, you cannot swap the pictures in that case.
6. If both pictures are pay services, only the main-picture will be presented.

Chapter 6

Listing Services

6.1 Editing the favourite list

You can make your own favourite services list. In fact, you can define multiple favourite services lists, each being a 'group' of chosen services.

Select the Organizing Favorites menu. You should see a screen like the left figure.

There are three columns:

- Group list (left)
- Favourite list (centre)
- Services list (right)

The services list contains all available services, whereas the favourite list contains only chosen services that have been added to the highlighted group. As you move the highlight bar up or down on the group list, favourite services belonging to the highlighted group get shown in the favourite list.

You can add up to 30 groups. To add a group, select the NEW option in the group list; then the on-screen keyboard appears. See § 6.2 for how to use the on-screen keyboard.

To rename a group, put the highlight bar on the group entry you want and press the F2 button; then the on-screen keyboard appears. See § 6.2 for how to use the on-screen keyboard.

To delete a group, put the highlight bar on the group entry you want and press the F3 button; then a message box appears asking you for confirmation. If you select Yes, it will be deleted.

You can add a favourite service to a group by taking the following steps:

1. Put the highlight bar on a desired group entry in the group list and press the OK button to select it. The highlight bar then moves to the services list.
2. To add a service to the selected group, put the highlight bar on a desired service entry and press the OK button. The selected service entry gets added to the favourite list. Repeat this step to add more entries.
3. Press the F1 button and the highlight bar get moved to the favourite list. You can delete a favourite entry with the OK button.
4. To select another group, press the F1 button again. By pressing the F1 button, the highlight bar gets moved to each column.

To add radio services, press the button; then radio service entries get listed in the services list. To recall the television services list after adding radio services, press the button again.

With your favourite services list, you can select your favourite services more easily. Refer to § 5.2.2 for detailed description.

6.2 How to use on-screen keyboard

You can move the highlight key horizontally with the ◀ and ▶ buttons and vertically with the ▲ and ▼ buttons. Pressing the OK button on a key enters its letter in the input line. To type a space, select the Space key. To type lower case letters or numerals, select the Other key.

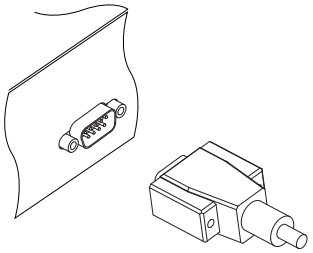
To delete a letter, put the cursor to the right of the desired letter on the input line and then select the Del key. You must select the Save key to complete naming; otherwise, if you press the EXIT button, it will not be named.

6.3 Transferring receiver data

The digital receiver retains the following data:

- Services list
- Favourite lists
- Preference settings

It is possible to transfer the receiver data from the digital receiver to another same digital receiver by connecting them with a RS-232 cable. To have the receiver data transferred, perform the following steps:



1. Plug one end of a RS-232 cable (9 pin D-sub cable) into the RS-232 port on the digital receiver, and the other end into the matching port on the other digital receiver.
2. Turn on the source digital receiver.
3. Select the Installation > Transfer Firmware > Transfer Data to Other IRD menu, then you get asked for confirmation; select Yes.
4. To start the data transfer, turn on the target digital receiver.
5. A progress bar appears showing the progress of the data transfer.
6. Restart the target digital receiver when the data transfer is complete.

Chapter 7

Recording and Playing

You can record two different services while watching another if two of the services are provided through the same transponder The TF 600 PVRc digital receiver has two tuners so that you can enjoy the following:

- While playing a recording back, you can watch a service in the sub-picture using the picture-in-picture feature.
- You can record two different services while playing back a previously recorded programme.
- You can record two different services while watching one of them using the time shift feature. See § 5.5 for the time shift feature.
- You can even record two different services while watching two other different services—only if two or more services are provided in a same transponder and the other services are provided in another same transponder. In this case you can watch two services at the same time using the picture-in-picture feature. See § 5.6 for the picture-in-picture feature.

7.1 Recording a programme

Once recording has started, a symbol like the left figure will be displayed at the top right of the screen for a few seconds. When you are watching a service different from the service being recorded, you can view a number on the centre of the symbol, which indicates the order that the recording is started.

To record two programs simultaneously, two tuners are allocated for the recording. Therefore, you can only change to a limited number of services while the two programs are being recorded.

CAUTION

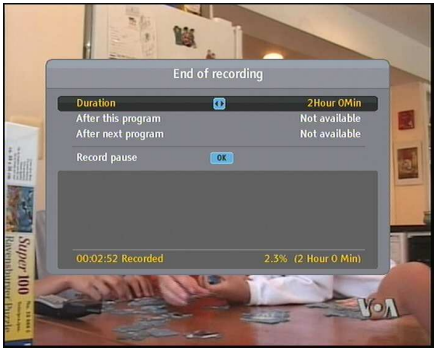
Do not move the digital receiver nor pull out the plug while it is running. It may cause damage to recorded programmes. Note that Topfield is not responsible for damages inflicted on files that are stored on the hard disk drive.

NOTE

When a recording is complete, it might not be saved if its recording duration is less than one minute.

7.1.1 Instant recording

To instantly record the programme you are watching at present, press the [●] button. Pressing the [II] button will not pause the current recording like it does with a video cassette recorder.

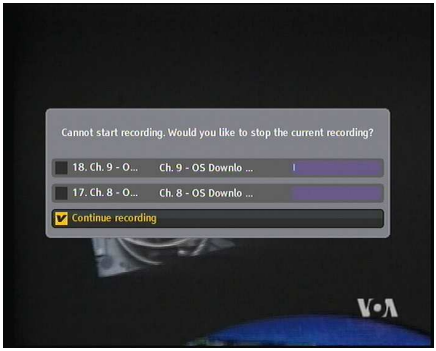


Pressing the ⏸ button will pause the live show and begin time shifting within the current recording even with the Time Shifting option disabled. However, it is still possible to pause a recording. After a recording is started, pressing the ● button displays a menu like the left figure, in which you can set the recording duration.

To specify an arbitrary recording duration, set the Duration option as you desire with the ◀ and ▶ buttons and press the OK button; the recording will end at the specified time.

If the information about the next programme is provided by the electronic programme guide, the After this program and After next program options will be available. Once the After this program option is selected, the current recording will stop when the current programme is scheduled to end. Likewise, once the After next program option is selected, the current recording will stop when the next programme is scheduled to end.

Selecting the Record pause option pauses recording. When you press the ● button again, you will see this option is changed to Record continue. To resume recording, select it.



To stop recording, press the ■ button; then a box like the left figure appears, which shows programmes currently being recorded. If you select one, its recording will stop.

While a recording is going on, you can watch or record another service.

To additionally record another service, switch to the service you want to record, and press the ● button.

Once a recording is started, it is put on the recorded programme list even though it is not finished yet. The recording file is named after its service name with a suffix of a number. To view the recorded programme list, press the ▤ button or alternatively select the File List menu.

See § 7.2 for detailed description about the recorded programme list.

7.1.2 Timer recording

You can set a service to be recorded at a specific time. Even if the digital receiver is in standby mode, it will switch into operation mode and start recording at a specified time. When the recording comes to the end, the digital receiver will switch back into standby mode again in one minute. However, if you press any button on the remote control or on the front panel even just one time, the digital receiver will not switch into standby mode.

To input a timer recording, select the Timer Setting menu; then the timer list will be displayed.

To add a new timer event, press the F1 button, and a box like the left figure appears. Take the following steps:

1. Set the Record option to On to make a recording. If this option is set to Off, the digital receiver will turn on at the specified time but not record; instead, you may record with your video cassette recorder or suchlike in this case.

2. If you want a radio programme, set the Type option to Radio; otherwise, set it to TV.

3. Set the Service option to the service which provides the programme you want. Pressing the OK button on this option displays a services list, from which you can select your desired service.

4. There are five timer modes:

   One Time means literally 'one time'.

   Every Day means literally 'every day'.

   Every Weekend means 'Saturday and Sunday every week'.

   Weekly means 'one day every week'.

   Every Weekday means 'from Monday to Friday every week'.

   If your favourite programme is broadcast at weekends and you wish to record every episode of the programme, set the Mode option to Every Weekend.

5. Set the Date option to a desired date, on which the digital receiver will turn on. The date format is *day/month/year-day of the week*.

   Set the Start Time option to a desired time, at which the recording will be started. The time format is *hour:minute*.

6. Set the Duration option to a desired time, in which the recording will be finished.

7. Pressing the OK button on the File Name option displays the on-screen keyboard, with which you can specify a file name for the timer recording. If you do not specify anything, it will be named after the service name. See § 6.2 for how to use the on-screen keyboard.

8. To set a timer recording with the above settings, select the OK option; otherwise, it will not be saved and will not occur.

You can also edit or delete timer events in the timer list.

To edit a timer entry, put the highlight bar on the entry you want and press OK button; then appears a box in which you can change its settings in the same manner as making a new one.

To delete a timer event, put the highlight bar on the entry you want to remove and press the F2 button; then you are asked for confirmation. If you select Yes, it will be deleted.

7.1.3 Scheduling recordings using the programme guide

If the electronic programme guide is properly provided, you can make timer events on it. The instructions on how to make timer recordings using the electronic programme guide are as follows:

1. Press the GUIDE button to display the electronic programme guide.
2. Select a service you want to record with the ◀ and ▶ buttons.
3. Select a programme you want to record with the ▲ and ▼ buttons.
4. To make a timer event without recording, press the OK button; the letter **P** is displayed. To make a timer event with recording, press it once more or alternatively press the ● button; then the letter **R** is displayed.
5. This timer event is placed on the timer list. To change its settings, press the ● button to show a box in which you can edit. Refer to § 7.1.2 for detailed description.
6. Pressing the OK button once more will cancel the timer.

7.1.4 Recording a time-shifted programme

See § 5.5 for detailed description about the time shift feature. While watching a programme with time shift, you can record it by performing the following steps:

1. Press the ▸ button to display the progress bar.
2. To move to the beginning of the desired scene, hold down the ◂◂ or ▸▸ button until it is reached.
3. Press the ● button to start recording. The time shift buffer from that position onwards will now be recorded.
4. Press the ■ button to stop time shift.
5. Press the ■ button once more to stop recording.

7.1.5 Recording a pay service programme

You can record a pay service programme without the subscription card. However, you need the subscription card to play it back because it has not been descrambled. So it is recommended to record pay service programmes with the subscription card so that they can be recorded in descrambled form. In that case you can enjoy them without the subscription card like free service ones.

To record a programme of a pay service in descrambled form, perform the following steps:

1. Select a programme of a pay service you want to record.
2. Make sure that the subscription card is inserted in the slot on the front of the digital receiver.
3. Start recording.
4. Do not switch to other service nor use time shift until it is finished.

NOTE

If you switch to other service or use time shift in the middle of recording a pay programme, it will be recorded without descrambling from that moment. Even if the recording is only partially descrambled, you need the subscription card to play it back.

7.2 File archive

When a programme is recorded, it is stored as a file on the built-in hard disk drive of the digital receiver. You can select a recording to play back from the recorded programme list.

Select the File List menu or alternatively press the ▤ button to display the recorded programme list. The file information is comprised of the following elements: file number, file name, recording time, playing duration, file size and so on.

You can play, move, delete, rename and lock a recording file. You can also sort the recording files by file name, playing duration or file size. In addition, you can make a new folder.

7.2.1 To delete a recording

To delete a recording, put the highlight bar on it and press the ⏭ button; then you are asked for confirmation. If you select Yes, it will be deleted.

7.2.2 To sort recordings

To sort the recordings, perform the following steps:

1. Press the F4 button to display the additional options.
2. Set the Sorting option to Alphabetic, Time or Size as you want.
3. Press the EXIT button.
4. They are sorted by the specified option.

7.2.3 To lock a recording

To lock a recording so that other people cannot play it, perform the following steps:

1. Put the highlight bar on a desired recording.
2. Press the F4 button to display the additional options.
3. Set the Lock option to Locked.
4. Press the EXIT button.
5. The lock symbol ( ) is displayed on it.

If you select a locked recording to play it back, you will be asked for your personal identification number.

7.2.4 To rename a recording

To change the name of a recording, perform the following steps:

1. Put the highlight bar on a desired recording.
2. Press the F4 button to display the additional options.
3. Select the Rename option, and the on-screen keyboard appears. Change the name and save it. See § 6.2 for how to use the on-screen keyboard.

7.2.5 To make a new folder

To make a new folder, press the F2 button; then a new folder named GROUP # is created. You can change its name in the same manner as renaming a recording. See above.

7.2.6 To move a recording to another folder

To move a recording to another folder, put the highlight bar on a desired recording and press the F3 button; then the folders are listed. Once you choose a folder, the recording is moved to it.

7.3 Playing back a recording

When a programme is recorded, its additional contents such as audio tracks or teletext are also recorded together. So you can enjoy them while playing back a recording.

The instructions on how to play a recording are as follows:

1. Select the File List menu or alternatively press the [▤] button to display the list of recorded programmes.
2. Put the highlight bar on a desired recording.
3. Press the [OK] button to start playback.
4. To stop playback, press the [■] button.

During a playback, you can enjoy the following tricks:

- To see the detailed information about the currently played recording, press the [*i*] button; then the information box appears and shows its file name, playing duration, programme information, and so on.
- To pause playback, press the [⏸] button. To resume it, press the [▸] button.
- To go forward, hold down the [▸▸] button; to go backward, hold down the [◂◂] button.
- To display the progress bar, press the [▸] button; to hide it, press the [▸] button again.
- when the progress bar is hidden, you can move to a desired scene by entering the percentage with the numeric buttons.

7.3.1 To navigate using the progress bar

First press the [▸] button to display the progress bar, then:

- To go forward, hold down the ⏩ button; to go backward, hold down the ⏪ button.
- To bookmark a position, refer to § 7.3.4.
- If there are no bookmarks, you can jump forward 30 seconds at a time by pressing the F3 button.
- To jump back to beginning of recording, press the ⏮ button.
- To jump to end of recording, press the ⏭ button.
- To hide the progress bar, press the ▶ button again.

7.3.2 To play in slow motion

To watch in slow motion during a playback, press the ⏯ button. If you press it repeatedly, the playback speed changes in 3 steps: 1/2, 1/4 and 1/8 times. To resume normal speed, press the ▶ button.

7.3.3 To play in fast motion

To watch in fast motion during a playback, press the ⏩ button. If you press it repeatedly, the playback speed changes in 3 steps: 2, 4 and 6 times. To resume normal speed, press the ▶ button.

You can play not only forward but also backward in fast motion. To play backward, press the ⏪ button. If you press it repeatedly, the playback speed changes in 3 steps: 1, 2 and 3 times. To resume normal speed, press the ▶ button.

7.3.4 To make a bookmark

You can mark favourite parts of a recording by creating bookmarks, and then jump to them. You can have up to 64 bookmarks. Bookmarks are stored with the recording so that you can use them again afterwards. To make bookmarks, perform the following steps during playback:

1. Press the ▸ button to display the progress bar.
2. To add a bookmark, press the F2 button at a desired scene; then you will see a small dot appear above the progress bar like in the picture above.
3. To jump forward to next bookmark, press the F3 button.
4. To jump to first bookmark, press the ⏮ button then the F3 button.
5. To delete a bookmark, jump to it and then press the F2 button.

7.3.5 To play back a recording repeatedly

You can play back a recording repeatedly both in whole and in part.

To play back in whole, press the ⏯ button when the progress bar is hidden; then the repetition symbol (↻) is displayed on the information box. To cancel it, press the ⏯ button again.

To play back in part, perform the following steps:

1. Press the ▸ button to display the progress bar.

2. Move to the beginning scene of the part you want to play repeatedly by holding down the ◂◂ or ▸▸ button.
3. Press the ▸◂ button, then the pointer starts to blink.
4. Move to the end scene; the part is marked in purple.
5. Press the ▸◂ button again, then the part turns green, and repeated playback starts.
6. To cancel it, press the ▸◂ button when the progress bar is displayed.

7.3.6 To play back recordings in sequence

You can play several recordings continuously in sequence by performing the following steps:

1. Press the ☰ button or alternatively select the File List menu to display the list of recorded programmes.
2. Select each desired recording with the F1 button. once a recording is selected, it gets numbered.
3. Press the OK button to start playback.
4. The selected recordings are played in the sequence that they are numbered.
5. To jump to start of next selected recording, press the ▸ button to display the progress bar, then press the ▸| button.

7.3.7 To play back a scrambled recording

If you have recorded a programme of a pay service with the subscription card, you can play it as freely like one of a free service. Otherwise you need the subscription card to play it, because it has been recorded without unscrambling even though it may have been partially descrambled.

On the recorded programme list, a purely green **$** indicates the recording has been wholly descrambled; on the other hand, a yellowish green **$** indicates it has been partially descrambled, and a purely yellow **$** indicates it has not been descrambled at all.

Refer to § 7.1.5 for how to record a pay service programme.

7.4 Copying a recording

You can copy a recording file in whole or in part during a playback by performing the following steps:

1. Start playback of a recording you want.
2. Move to a scene from which you want to start copy by holding down the ◂◂ or ▸▸ button.
3. Press the ● button, then it will be copied in a new file which is named after the original recording with a suffix of 'COPY' and a number.
4. To stop copy, press the ■ button.

NOTE

You can make a copy of a long recording more quickly by starting to play the original recording, then pressing ▸▸ button until the speed has increased to six times, then pressing the ● button. The copy will be done at six times normal speed.

7.5 MP3 playback

You can enjoy music or audio books in MP3 format with the digital receiver. For how to transfer MP3 files to the digital receiver from your computer, refer to § 7.6 or Chapter 8.

To play a MP3 file, perform the following steps:

1. Press the ☰ button and then the ◂◂ or ▸▸ button to display the MP3 list.

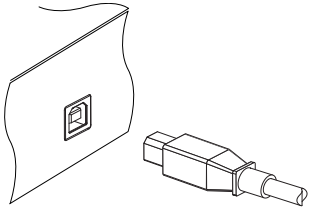
2. Put the highlight bar on a desired file; if you want to play several files, select them with the F1 button.
3. Press the OK button to start playback.
4. To stop playback, press the ■ button.

To play all MP3 files in a subfolder, put the highlight bar on a desired folder, and press the ▸ button.

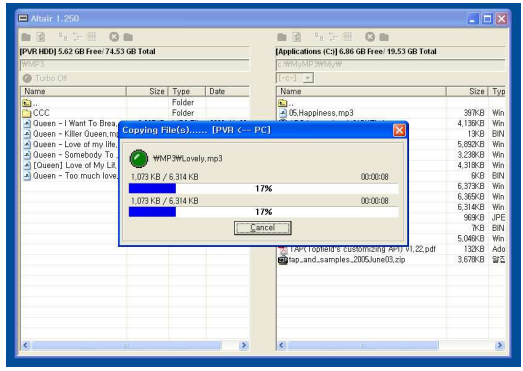
7.6 Transferring recording files

You can transfer files between the digital receiver and your computer via USB connection with *Altair*, which is a program used to transfer files. You can download it from the Topfield web site, http://www.i-topfield.com.

To transfer files, take the following steps:



1. Download the *Altair* programme and the USB driver from the Topfield web site.
2. Install them on your computer.
3. Plug one end of a USB cable into the USB port on the digital receiver, and the other end into the matching port on your computer.
4. Turn on the digital receiver.
5. Run *Altair*, then its screen will appear like the figure below.



The instructions on how to use *Altair* are as follows:

1. Select files to transfer. The left panel shows files and folders that are on the digital receiver, while the right panel shows files and folders that are on your computer.
2. To transfer files from the digital receiver to your computer, press the right arrow button (→).
3. To transfer files from your computer to the digital receiver, press the left arrow button (←).

At the top of the panel, you will see a message that says Turbo Off. Turbo mode is a way of speeding up the transfer of files to and from the digital receiver. You can click the circle to the left of the message to turn turbo mode on or off.

Turbo mode makes transferring files faster, but the digital receiver stops responding to commands from the remote control. If you want to use the digital receiver while transferring, or if any scheduled recordings are due to start, you should not use turbo mode.

NOTE

You cannot play back the recordings with a regular MPEG player on your computer because they are formatted differently from the standard MPEG format.

Visit http://www.videolan.org or http://www.elecard.com where you can find a MPEG player able to play them back. If you wish to author DVDs with them, visit http://www.haenlein-software.com where you can find a DVD authoring program able to process them.

7.7 Formatting the hard disk

You can delete all contents stored in the hard disk drive by formatting it. If you wish to do that, select the Installation > Format Hard Disk menu, then you are asked for confirmation. If you select Yes, formatting will start.

CAUTION

Formatting the hard disk will delete all files permanently.

NOTE

If a new hard disk drive is installed, it must be formatted because the file system of the digital receiver is different from any of the personal computer. You can neither record nor use time shift with an unformatted hard disk.

Chapter 8

Accessing to The Digital Receiver via The Internet

NOTE

The following section describes complex functions that should only be used by owners with advanced computer knowledge.

TF 600 PVRc provides a web service and FTP service. You can make scheduled recordings or download recording files to your computer via these services. Here you need a wireless router, which will connect the digital receiver to your computer or the Internet. To use the network features of the digital receiver, you should take the following steps:

1. Configuring your router for the digital receiver.
2. Configuring the Wireless Local Area Network (WLAN) settings on the digital receiver.
3. Accessing the home page of the digital receiver. Refer to § 8.3 for detailed description about things you can do by way of the web service of the digital receiver.
4. Accessing the FTP Server of the digital receiver.

NOTE

The web server and FTP server of the digital receiver don't work in standby mode. So it must be powered up all the time if you wish to use the web service at any time.

8.1 Configuring the router

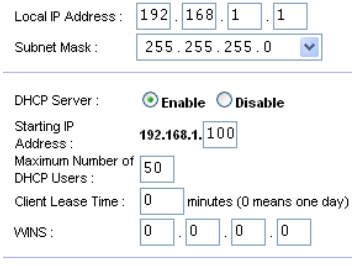
In this section, the setup program of *WRT54G*, which is a router manufactured by *Linksys*, will be referred to as an exemplary to help your understanding of how to configure the router for network connection.

NOTE

For detailed description about how to set up the router, refer to the manual of your router.

8.1.1 To access within the local area network

Once your router is powered up, a local area network gets created whether or not it is connected to the Internet.



You can let the router automatically assign a dynamic IP address to the computers or devices connected to the network by enabling the DHCP server of the router. In this case, you can access the digital receiver with the IP address which is assigned to the digital receiver by the router.

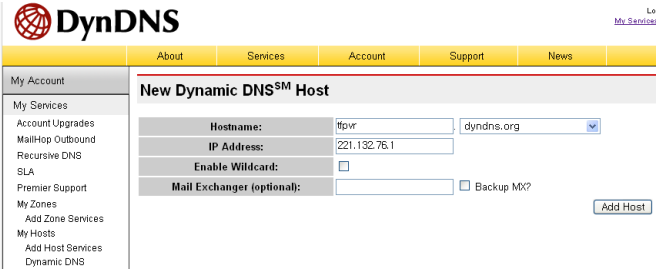
If the digital receiver reboots, a new dynamic IP address will be assigned to it. You had better assign a static IP address to the digital receiver to avoid this inconvenience. For how to assign a static IP address, refer to the manual of your router. For how to specify a static IP address on the digital receiver, see § 8.2.

8.1.2 To access on the level of the Internet

When you are away from home, you can access the digital receiver inside your home if your router is configured to route access to the digital receiver by means of port forwarding. Via this feature, your router will lead you to the digital receiver when you access your router with its IP address.

Port Range					
Application	Start	End	Protocol	IP Address	Enable
PVRHTTP	80 to	80	Both	192.168.1. 161	☑
PVRFTP	20 to	21	Both	192.168.1. 161	☑
	0 to	0	Both	192.168.1. 0	☐
	0 to	0	Both	192.168.1. 0	☐

Your router may be assigned to a dynamic IP address by an Internet service provider. So if the router has rebooted, you cannot access it unless someone in your home can inform you of the changed IP address. However, many routers support Dynamic Domain Name System (DDNS) service, which can settle this problem.



If you use a DDNS service, you can access your router with a domain name. The instructions on how to use the DDNS service are as follows:

1. Make an account on a web site providing DDNS service, which should be supported by your router.
2. Configure your router with the account so that it can communicate with the web site.

Whenever a new dynamic IP address is assigned to the router, it will inform the DDNS service provider of the new IP address. This makes it possible that you access the router with a domain name at any time.

8.2 Configuring the wireless network settings on the digital receiver

You should configure the WLAN settings to enable the web service and FTP service. You had better refer to the manual of your router for understanding of technical terminology.

NOTE

Your router should be within five meters of the digital receiver.

IP configuration

Select the Installation > LAN Setting > IP Configuration menu.

You may assign a dynamic IP address to the digital receiver. To do so, set the DHCP option to On. You can view the dynamic IP address assigned to the digital receiver by your router at the WLAN Status menu.

Whenever the digital receiver is restarted, the dynamic IP address will be changed and you will have to check it at the WLAN Status menu to access the digital receiver. To avoid this cumbersome thing, you had better assign a static IP address rather than dynamic one.

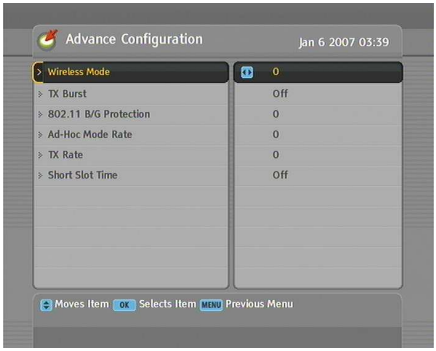
Set the DHCP option to Off, then the IP Address, Subnet Mask and Gateway options become enabled. You have to set these options to match the configuration of your router.

Set the User ID and Password options as you desire. When you access the FTP server, you will be asked for the account that is made with these options

NOTE

You can access the FTP server with an anonymous account. However, with an anonymous account you can only download files. You cannot upload files.

Advance configuration



To configure the network environment for the digital receiver in detail, select the Installation > LAN Setting > Advance Configuration menu.

The available values of each option are as follows:

Wireless Mode

0: 802.11 B/G mixed.
1: 802.11 B only

TX Burst

802.11 B/G Protection

0: Auto
1: Always on
2: Always off

Ad-Hoc Mode Rate

0: Adhere Wi-Fi spec
1: Violate Wi-Fi spec

TX Rate

0: Auto
1: 1 Mbps
2: 2 Mbps
3: 5.5 Mbps
4: 11 Mbps
5: 6 Mbps
6: 9 Mbps
7: 12 Mbps
8: 18 Mbps
9: 24 Mbps
10: 36 Mbps
11: 48 Mbps
12: 54 Mbps

Short Slot Time

0: Disable
1: Enable

Profile

To make profiles for various network connections, select the Installation > LAN Setting > Profile menu.

The value of the Country Region option is applied to every profile in common. It is not possible to specify this option differently per profile.

Table 8.1: Country Region

Value	Channel Range	Country
FCC	1–11	USA
IC	1–11	Canada
ETSI	1–13	Europe, Korea
SPAIN	10–11	Spain
FRANCE	10–13	France
MKK	14	Japan
MKK1	1–14	Japan
ISRAEL	3–9	Israel

To apply your chosen profile, set the Activate option to On.

To view or edit a profile, choose your desired profile at the Profile Name option and select the Edit Profile item.

A profile consists of several options. The available values of each option are as follows:

Channel: 1 to 14 depending on the value of the Country Region option only if the Network Type option is set to Ad Hoc.

Authentication Type: Open or Shared

Encryption Type: Not Use or WEP

Default Key ID: 1 to 4 only if the Authentication Type option is set to WEP.

Key Type: ASCII or HEXA only if the Authentication Type option is set to WEP.

Key: 26 hexadecimal characters or 13 ASCII characters only if the Authentication Type option is set to WEP.

To save a profile, select the OK item.

8.3 Accessing the web server

In way of the web server of the digital receiver, you can do the following:

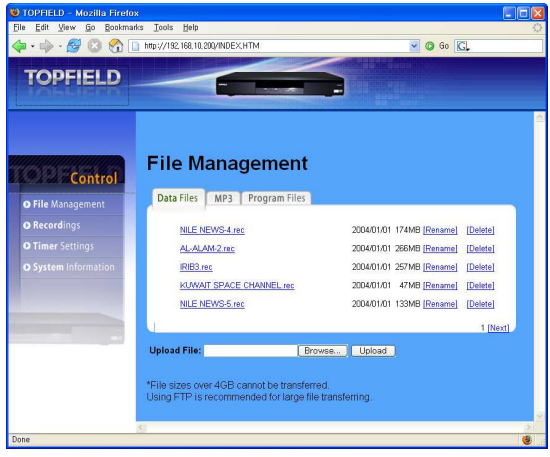
- Download recording files.
- Create new recording timers.
- View information about the programme currently being recorded.
- View the system information of the digital receiver.

NOTE

It is recommended to use the *Internet Explorer* web browser in order to fully enjoy the above facilities. If you use a different web browser such as *Netscape Navigator*, some problems may occur.

To access the digital receiver's home page through your web browser, enter its IP address, or domain name if you use a DDNS service. For the DDNS service, refer to the user manual of your router.

You cannot only download but also upload recording files or MP3 files in the File Management page. However, if you wish to download or upload a file of which size is 2 gigabyte or more, it is recommended to use the FTP server rather than the web server.

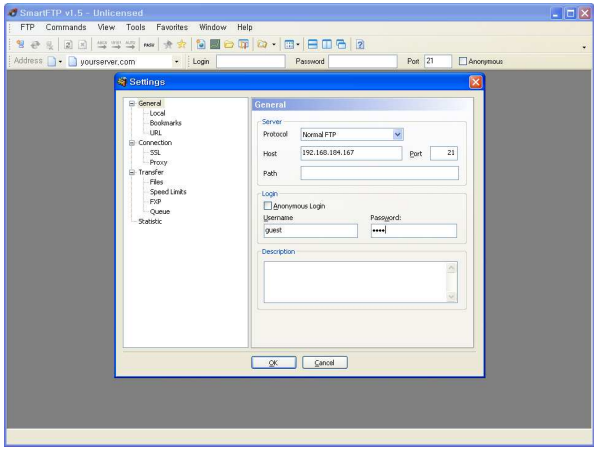


NOTE

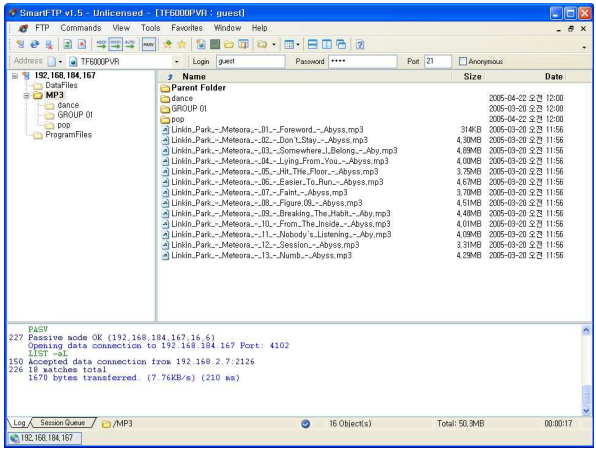
The maximum number of user connections is only one. This means that you cannot access the web server while someone else is occupying it.

8.4 Accessing the FTP server

You need an FTP client program to access the FTP server of the digital receiver.



You can log into the FTP server with the user name and password specified in the WLAN Setting menu. For how to configure the WLAN settings, refer to § 8.2.



NOTE

The maximum number of user connections is only one. This means that you cannot access the FTP server while someone else is occupying it.

Chapter 9

Topfield Application Program

If you are good at programming with C++ language, you can make a program executable to run on the digital receiver. We call this a Topfield Application program (TAP). In making a TAP, it is recommended to use *Diab* compiler of *Wind River*, whose web site address is http://www.windriver.com. Some variants of *GCC* compiler also might be available as a compiler for TAPs. You can get the Application program Interface (API) libraries for TAPs from the Topfield web site, http://www.i-topfield.com.

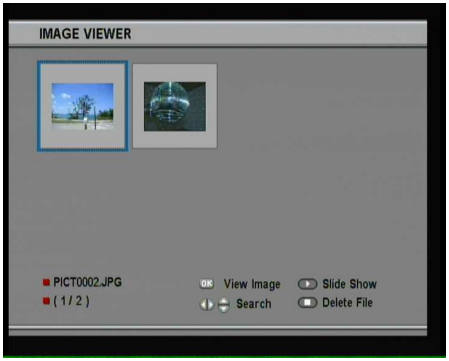
Your TAPs will be run under the following conditions:

- Their extension name is *tap*. If they have any other extension name, they will be ignored.
- They are in the Program Files folder. If they are in other folders, they will be ignored.

For how to transfer your program to the digital receiver, refer to § 7.6 or Chapter 8.

To run a TAP in the digital receiver, perform the following steps:

1. Press the [≡] button and then the [◂◂] or [▸▸] button to display the program file list.
2. Place the highlight bar on a file entry you want to run.
3. Press the [OK] button to start the program.
4. To exit the program, press the [EXIT] button.



The figure on the left is a running screen of a TAP, *Image Viewer*, which displays image files of BMP, GIF and JPG format. This TAP is available from the web site, http://www.i-topfield.com.

In the program file list, you can use a variety of file control functions including: renaming, sorting, deleting and so on. For detailed descriptions about the file control functions, refer to § 7.2.

If you want a program to run automatically when the digital receiver starts up, move the program to the Auto Start folder. Press the [0] button at start-up if you want the program not to run.

Chapter 10

Firmware Update

The digital receiver has a stable and convenient firmware to use. However, a new firmware may be released to improve the digital receiver. You can get the latest firmware and an update utility which runs on most versions of Windows from the Topfield web site, http://www.i-topfield.com.

10.1 Checking the firmware information

You have to check the firmware information of your digital receiver before downloading a new firmware. Select the Information > IRD Status menu. You should see a screen like the left figure.

Remember the System ID, and download a firmware with the same system identification.

NOTE

You can only update with firmwares of which system identification is identical to that of yours. Otherwise you will fail in firmware update.

10.2 From the network via LAN port

You can get a new firmware from the network via LAN port.

Select the Installation > LAN Setting > IP Configuration menu.

You should see a screen like the left figure.

You may assign a dynamic IP address to the digital receiver. To do so, set the DHCP option to On.

If you have a static IP address, set the DHCP option to Off, then the IP Address, Subnet Mask and Gateway options become enabled. You have to set these options according to your IP address.

10.2.1 Automatic firmware update via LAN port

To update the firmware automatically, follow the steps below:

1. Plug a LAN calbe into the LAN port on the digital receiver.
2. Select the Installation > LAN Setting menu.
3. Set the Auto LAN Firmware Upgrade option to On, then turn off the digital receiver.

4. When you turn on the digital reciever, the latest firmware will be updated automatically. If your receiver has the latest firmware, the firmware update will be skipped.

10.2.2 Manual firmware update via LAN port

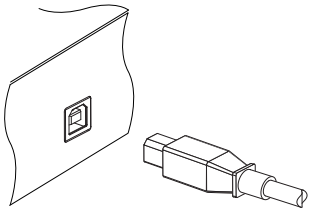
To update the firmware manually, follow the steps below:

1. Plug a LAN calbe into the LAN port on the digital receiver.
2. Select the Installation > LAN Setting menu.
3. Set the Auto LAN Firmware Upgrade option to Off.
4. If you select the Installation > LAN Firmware Upgrade menu, the digital receiver will ask you whether to start firmware update. If you select Yes, it will be started.

10.3 From your computer via USB port

You can transfer a new firmware to the digital receiver from your computer by connecting them with a USB cable. You need *TFDN_USB*, a firmware transfer utility for this, which is available from the web site, http://www.i-topfield.com.

To update the firmware with this method, perform the following steps:



1. Download a new firmware applicable to your digital receiver from the Topfield web site.
2. Plug one end of a USB cable into the USB port on the digital receiver, and the other end into the matching port on your computer.
3. Turn on the digital receiver.
4. Run *TFDN_USB*.

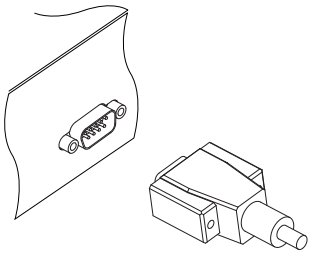
The instructions on how to use *TFDN_USB* are as follows:

1. Press the Find button to select the new firmware file.
2. Press the download button, and then restart the digital receiver to start the file transfer.
3. A countdown will be displayed on screen
4. Restart the digital receiver once more when the file transfer is complete.

10.4 From your computer via RS-232 port

It is possible to transfer a new firmware to the digital receiver from your computer by connecting them with a RS-232 cable. You need *TFD-Down*, a firmware transfer utility for this, which is available from the web site, http://www.i-topfield.com.

To update the firmware with this method, perform the following steps:



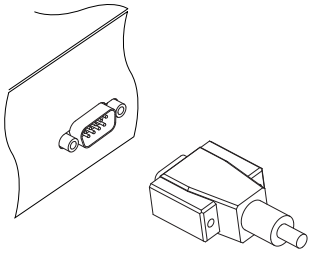
1. Download a new firmware applicable to your digital receiver from the Topfield web site.
2. Turn off the digital receiver.
3. Plug one end of a RS-232 cable (9 pin D-sub cable) into the RS-232 port on the digital receiver, and the other end into the matching port on your computer.
4. Run *TFD-Down*.

The instructions on how to use *TFD-Down* are as follows:

1. Press the Find button to select the new firmware file.
2. Press the download button, and then turn on the digital receiver to start the file transfer.
3. A countdown will be displayed on screen
4. Restart the digital receiver when the file transfer is complete.

10.5 From another digital receiver via RS-232 port

It is possible to transfer the firmware from the digital receiver to another same digital receiver by connecting them with a RS-232 cable. To update the firmware with this method, perform the following steps:



1. Turn off the target digital receiver.
2. Plug one end of a RS-232 cable (9 pin D-sub cable) into the RS-232 port on the digital receiver, and the other end into the matching port on the other digital receiver.
3. Turn on the source digital receiver if not already on.
4. Select the Installation > Transfer Firmware > Transfer Firmware to Other IRD menu, then you get asked for confirmation; select Yes.
5. Turn on the target digital receiver to start the firmware transfer.
6. A progress bar appears showing the progress of the firmware transfer.
7. Restart the target digital receiver when the firmware transfer is complete.

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Correct disposal of this product

This marking shown on the product or its literature indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product or their local government office for details of where and how they can dispose this product for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Topfield continues to improve the digital receiver which this guide explains. So some explanations and illustrations in this guide could be different from the actual digital receiver.

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